

**REMARKS**

**Claim Rejection 35 USC §102**

Claim 4 remains rejected as being anticipated by the sequence reported by Beard et al. which is 8134 nucleotides in length. Claim 4 reads as follows:

4. A primer for use in PCR amplification for detection of FMDV consisting essentially of SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, or SEQ ID NO:20.

The specification notes at page 10, line 22-23 that the FMDV genome consists of a “single RNA positive strand”. It is noted also at page 5, lines 4-18 that SEQ ID NOS: 16-20 are not all of the same polarity, with SEQ ID NOS:17-20 being 3’ reverse primers. Therefore even with the Examiners transmogrification of the transitional phrase “consisting essentially of” into “comprising”, the Examiner fails to make a prima facie case of anticipation for SEQ ID NOS:17-20.

Further, Applicants have previously noted that claim 4 as amended is directed specifically to primers useful in the polymerase chain reaction.

A primer is defined at page 7 of the specification as:

“an oligonucleotide (synthetic or occurring naturally), which is capable of acting as a point of initiation of nucleic acid synthesis or replication along a complementary strand when placed under conditions in which synthesis of a complementary stand is catalyzed by a polymerase”

The Examiner asserts the following:

It appears that Applicant is attempting to assign a length limitation on the term “oligonucleotide” in order to exclude the genome of FMDV as a primer although no length limitation is found in the specification.

To the contrary, Applicants are merely using the term “oligonucleotide” as it is used in the art. The Shorter Oxford English Dictionary (5<sup>th</sup> Edition) defines “oligonucleotide” as follows:

“a polynucleotide whose molecules contain a relatively small number of nucleotides”

It is respectfully submitted that a “relatively small number of nucleotides” is art recognized to not encompass the entire genome of anything including FMDV which in the case of the sequence reported by Beard is 8134 nucleotides.

The Examiner also states that:

“Applicant has not provided any evidence that Beard’s sequence would not be capable of functioning as a PCR primer.”

Applicants note that Beard’s sequence, as the Examiner is aware, represents an entire genomic sequence of an FMDV isolate. Applicants would submit that the skilled artisan recognizes that in the context of this application, the FMDV genomic sequence is the target sequence and that primers to amplify any such sequence or a portion of such sequence would have to be considerably shorter in order to amplify anything at all.

For a review of the fundamental concepts of the polymerase chain reaction Applicants provide herewith. page 279 of Twyman, R.M.: Advanced Molecular Biology. A Concise Reference (Bios 1998).

It is believed that the boxed text “Fundamental concepts and Definitions” provides a sufficient discussion of the differences between a target sequence and an oligonucleotide primer as those terms are used in relation to the polymerase chain reaction.

Given all of the foregoing Applicants respectfully request that the rejection over *Beard et al.* be withdrawn.

### **CONCLUSION**

In view of all the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,  
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